ENVIRONMENTAL ASSESSMENT

Case File No.: AA-082255

AA-040-EA-00-012

Type of Action: Kolmakof Mine Removal Action

Location: Near Aniak, Alaska, Section 6, T. 17 N., R 53 W., Seward Meridian

Applicant: Bureau of Land Management
Anchorage Field Office

Prepared by: Harrison Griffin, Physical Scientist

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Date: June 8, 2000

I. INTRODUCTION

The Kolmakof Mine is located 18 miles east of Aniak, Alaska. The town site of Aniak is approximately 325 miles west of Anchorage. The Kolmakof Mine is located adjacent to the Kuskokwim River, which flows seaward and by Aniak. The mine can be accessed by either taking a helicopter or boat from Aniak. Access by boat is accomplished by landing at an overgrown mining road along the riverbank and hiking approximately two miles to the site.

The Kolmakof Mine is one of the earliest known cinnabar deposits to have been discovered in Alaska. Ore bodies were probably discovered by the Russians encamped at Fort Kolmakoffski around 1838. Two flasks of mercury were extracted from the mine around 1909 and 1910. It is believed that 250 additional flasks were removed from the site between 1881 and 1993, one flask equaling 76 pounds (~**b** gallon). Mining claimants completed mineral assessment activities between 1964 and 1994. Currently, all claims in the Kolmakof mining area have been deemed abandoned and void.

In 1999, BLM performed an initial site investigation of the Kolmakof Mine for the Abandoned Mine Lands (AML) program. Evidence of mining activity in the area (55 gallon drums of waste oil, several bags of caustic processing chemicals, frothing agents, propane tanks and multiple bags of lime) was discovered and photographed during this initial site investigation.

On June 12, 2000, BLM will be conducting a second site investigation to perform a Preliminary Assessment and plan a removal action for late July or August 2000. The removal action in July/August will involve the recycling and/or disposal of 55 gallon drums of containerized waste oil, miscellaneous caustic chemicals, containerized tanks of propane and lead/acid batteries. Bags of lime found on-site will be thinly disbursed over a large section of boreal forest.

A. Purpose and Need for the Proposed Action:

The Kolmakof Mine is on a parcel of BLM land selected by the Kuskokwim Corporation, an Alaska Village Corporation. The Kuskokwim Corporation will not accept this parcel until the mine is cleaned up and the land restored to an acceptable condition. Work outlined in the Proposed Action, including the removal of containerized waste oil and caustic sodas, spreading of lime, venting of propane and the barging out of the remaining containers for recycling or disposal, should restore the lands to a condition acceptable for conveyance.

B. Conformance With Land Use Plan:

The lands are within the boundary of the Alaska Southwest Planning Area Management Framework Plan (MFP), dated November 25, 1981. The Proposed

Action is covered under the Watershed (W-1.1) Activity Objective of the MFP which states that BLM is to "maintain water quality in accordance with the Alaska Water Quality Standards".

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action:

BLM is proposing to remove hazardous materials from the Kolmakof Mine, Section 6, T. 17 N., R. 53 W., Seward Meridian (see attached map). BLM plans to dispose of approximately six 55 gallon drums of waste oil, 1,000 lbs. of lime, several bags of uncharacterized caustic material, frothing agents, containerized propane and several lead-acid batteries. The containerized propane will be disposed of by releasing any remaining gas on site. The lime will be disseminated on site. BLM intends to remove the remaining aforementioned materials via helicopter.

A helicopter pad will be cleared near the mine for landing, loading and take-off. Containerized waste materials will be hauled to a loading area via industrial hand trucks, secured to pallets, cargo netted and slung onto the shipping barge. If required, a back hoe or 4WD forklift will transport the palletized materials to the barge. If a backhoe is required, a limited number of trees will be cut back to allow access from the site to the barge via an overgrown mining road. Appropriate waste containment measures will be available (oil containment booms or "pigs", Visqueen, absorbent pads, additional waste containers, recovery booms) in case the sling strap fails, and/or the containerized waste should enter the Kuskokwim River or its surrounding riparian areas. Once the consolidated waste is safely on board, properly manifested and labeled, the waste material will be shipped to appropriate recycling facilities or licensed disposal facilities.

All work areas in this project are on previously disturbed former mining operation areas. BLM will hire environmental consultants to plan and implement the removal operation at the site according to all federal and state environmental and safety regulations. BLM will visit the site in early June to determine the exact means of waste extraction. Removal of waste materials is anticipated to begin in July or August 2000, weather and scheduling permitting.

B. Alternative #1 - No Action Alternative:

Under the No Action Alternative, the BLM will continue to implement current management practices. There would be no further investigation or cleanup actions implemented on-site.

III. AFFECTED ENVIRONMENT

A. Critical Elements:

The following critical elements are either not present or would not be affected by the Proposed Action or the No Action Alternative:

Air Quality
Areas of Critical Environmental Concern
Environmental Justice
Farm Lands, Prime or Unique
Floodplains
Invasive, Non-native Species
Native American Religious Concerns
Wetlands/Riparian Zones
Wild and Scenic Rivers
Wilderness

1. Cultural Resources:
   The Anchorage Field Office's (AFO) Cultural Resource specialist completed a review on April 18, 2000 (see attached). No cultural resources were identified as being in danger of

2. Subsistence:
   Subsistence resources consist of a wide variety of wildlife and selective vegetation. A subsistence clearance report was submitted on May 9, 2000 (see attached).

3. T&E Species:
   A Threatened and Endangered Species Evaluation, for wildlife and vegetation, was submitted on April 12, 2000 (see attached).

The following critical elements will be affected by either the Proposed Action or the No Action Alternative:

4. Wastes, Hazardous or Solid:
   Hazardous materials that will be removed from the site are 55 gallon drums of waste oil, lead-acid batteries, caustic processing chemicals, and emptied propane containers. Materials to be disbursed on-site are approximately 1,000 lbs. of lime and 150 lbs. of propane.

5. Water Quality, Surface and Ground:
Surface and ground water at the mine are not used for drinking. Samples of both have not yet been taken. However, water in the area is generally considered to be of good quality.

B. Land Status:
This site is located on lands validly selected by Kuskokwim Corporation, therefore the land is not Federal Public Land as defined in Section 102 (3) of the Alaska National Interests Lands Conservation Act (ANILCA). Once remediation issues have been resolved, the surface will be conveyed to the Kuskokwim Corporation, and the subsurface will be conveyed to the Calista Corporation.

C. Soils:
The Kolmakof Mine area falls under the IQ2 soil classification. This is representative of the Norton Sound Highlands and consists mainly of broad basins, valleys and low rolling plateaus. The dominant soils formed in thick silty colluvial deposits. Some soils found on the low rounded ridges formed in stony to gravelly residual material over partially weathered bedrock. Mostly all of the soils are shallow over bedrock. Work will be performed on previously disturbed sections of this unconsolidated colluvium.

D. Vegetation:
Much of the area is dominated by willow, spruce, alder, birch and poplar. Balsam, cottonwood, various local plants and moss can be found in and around the mine.

E. Visual Resources:
This area is managed under a Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The Visual Resource Scenic Quality of the area rates at 16 points which is Class B Quality. In the Class B type, there is a combination of some outstanding features, in this case the Kuskokwim River, and others that are fairly common to the physiographic region (rolling hills of Birch trees).

This level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer.

F. Wildlife:
Moderate to low densities of moose occur in the areas associated with willow shrubs and mixed forest. Predators such as wolves, black and brown bear, lynx

and marten may frequent the area, but are highly mobile and would be encountered for short periods of time. Resident and migrant land birds nest and feed in shrub (alder and willow) and forest habitats. Cliffs and bluffs along the Kuskokwim River at the mine site may provide nesting habitat for raptors including rough-legged hawk, bald eagle and peregrine falcon. Raptor surveys on the Kuskokwim River in 1991 identified an active rough-legged hawk nest at the mouth of the Kolmakof River, and an active peregrine falcon nest four miles upstream from the mine site. (The peregrine falcon has been delisted under the Endangered Species Act.) No other raptor surveys have been done since 1991. There have been no other wildlife surveys completed in this area.

IV ENVIRONMENTAL CONSEQUENCES

A. Impacts of the Proposed Action:

1. Critical elements:

a. Wastes, Hazardous or Solid:
By removing the hazardous materials from the site, potential ground and surficial water contamination will be avoided.

b. Water Quality, Surface and Ground:
Removal of the hazardous materials will preclude future opportunities for leaching of substances into the surface and ground waters. Removal of the hazardous materials could improve surface and ground water quality.

2. Soils:

Removal of the hazardous materials and any contaminated soils will improve overall soil conditions. If the hazardous materials were to remain present, potential for contamination would be higher.

3. Vegetation:

Minimal vegetation will be removed to clear a helicopter landing pad. If needed, some clearing of brush and vegetation will occur along the overgrown mining road. Short term impacts would include defoliation from the removal of vegetation for access purposes. In the long term, the Proposed Action will result in increased vegetation.

4. Visual Resources:

The materials removal area is approximately ¼ mile to the north of the Kuskokwim River and is generally not viewable by most river travelers. Metal roofs on the buildings are visible from the air but for the most part, the rest of the mining site is obscured by vegetation. Short term visual

impacts may result from the removal of vegetation. However, long term impacts should result in improved vegetative cover.

5. Wildlife:
The impacts of clearing a helicopter landing/loading area and an access route from the river will cause a temporary loss of shrub and forest habitats. It may also cause a disturbance of moose and land birds which use those habitats. The noise associated with helicopter landings and sling loading will temporarily displace wildlife from nearby, unaffected shrub and forest areas. Displaced animals may be more vulnerable to predators and may cause breeding birds to abandon nests and breeding territories, increasing mortality. However, the removal of the hazardous materials from the site is a positive action and outweighs the disturbances to wildlife and its habitat in the longer term (see mitigation measures).

B. Impacts of the No Action Alternative:

1. Critical Elements:

a. Wastes, Hazardous or Solid:
If not removed from the site, the hazardous material containers could eventually deteriorate and release contaminates to the soils, surface and ground water.

b. Water Quality, Surface and Ground:
Possible surficial and ground water contamination could occur if the contaminants were to be left in place.

2. Soils:
The No Action Alternative, which involves leaving caustic materials and other hazardous wastes on land that contains colluvial soils and windblown loess, would increase the likelihood of site contamination.

3. Vegetation:
Potential for bioaccumulation of toxins in plants could occur if these chemicals are left unattended to migrate into the water and soils.

4. Visual Resources:
The physical location and vegetative cover would continue to obscure the mine from view of river travelers if the hazardous materials were left in place. Metal roofing would still be visible from the air.

5. Wildlife:
Potential for bioaccumulation of toxins in wildlife could occur if these chemicals are left unattended to migrate into the water and soils. Exposed, uncontainerized hazardous materials at the mine could enter the food chain via direct or indirect consumption by animals.

C. Cumulative Impacts:
No residual or cumulative impacts are expected to be incurred by the implementation of the Proposed Action. Bioaccumulation of wastes and hazardous materials in plant and animal life may occur as a result of the No Action Alternative.

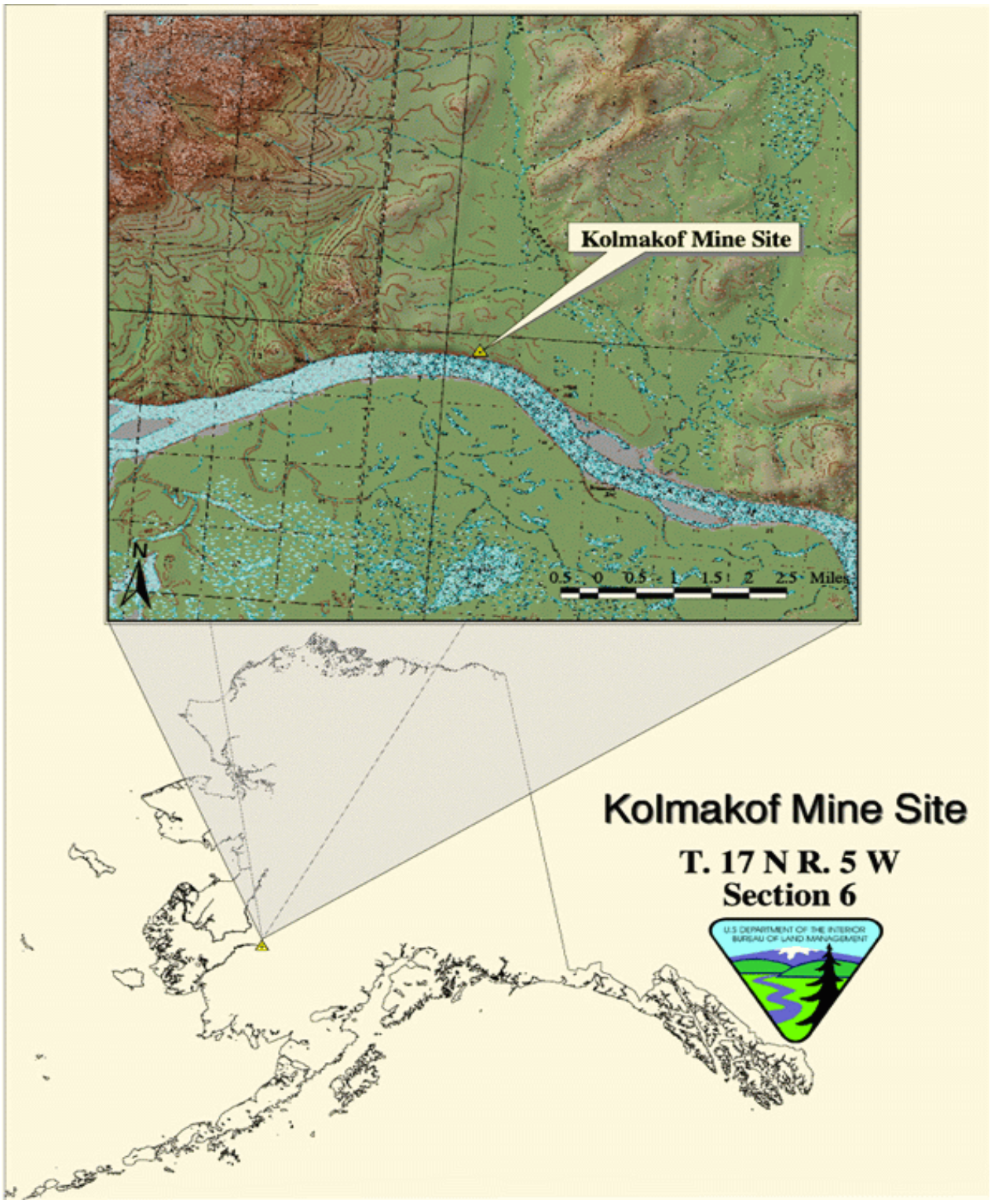
D. Mitigation Measures:
During helicopter operations, care must be taken to avoid disturbance to nesting raptors at the site and along the river en route to the Village of Aniak. The helicopter landing zone should be a minimum of ½ mile from any active raptor nest when accessing the site for removal of hazardous materials. Flight paths to and from the site should not pass over active nests. If an active nest is present and a ½ mile distance cannot be maintained, the work should not start before June 1st. After June 1st, the birds' clutch of eggs will be hatched and the risk of nest abandonment is reduced.

There are known peregrine falcon and other raptor nests along the river bluffs between the mine site and the village of Aniak. To avoid disturbance to these nests, the flight path to the village should not follow the river corridor, but stay ½ mile away, especially in areas of the river where cliffs and bluffs are present.

VI. CONSULTATION AND COORDINATION

A. Persons and Agencies Consulted:
Scott Arnold - ecology and environment, inc.

B. List of Preparers:
Harrison Griffin - Physical Scientist, Lead Preparer
Donna Redding - Archaeologist
Mike Zaidlicz - Forester
Jake Schlapfer - Recreational Planner
Bruce Seppi - Wildlife Biologist
Debbie Blank - Botanist
Jeff Denton - Subsistence Specialist/Biologist
Michael Alcorn - Environmental Specialist
Bill Diel - AML Geologist


Kolmakof Mine Site
N
0.5 0 0.5 1 1.5 2 2.5 Miles
Kolmakof Mine Site
T. 17 N R. 5 W
Section 6
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT